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(19) **United States**(12) **Patent Application Publication****Goren et al.**(10) **Pub. No.: US 2021/0315838 A1**(43) **Pub. Date: Oct. 14, 2021**(54) **SYSTEMS, METHODS, AND KITS FOR
DIAGNOSTICS AND TREATMENT OF VIRAL
RESPIRATORY INFECTION**(71) Applicant: **Applied Biology, Inc.**, Irvine, CA (US)(72) Inventors: **Ofer A. Goren**, Irvine, CA (US); **John
McCoy**, Irvine, CA (US)(21) Appl. No.: **17/301,188**(22) Filed: **Mar. 29, 2021****Related U.S. Application Data**

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(57)

ABSTRACT

The present disclosure includes methods, systems, kits and compositions for treating, preventing and diagnosing viral infections, specifically SARS-CoV-2 infections, with an anti-androgen and anti-thyroid medication, a thyroid receptor antagonist, a TGF- β inhibitor or a combination thereof. The present disclosure also describes methods and compositions for the treatment of viral respiratory diseases, specifically SARS-CoV-2 infections, including anti-androgens, anti-thyroid medications, thyroid receptor antagonists, TGF- β inhibitors, RXR inhibitors, furin inhibitors or other agents to disrupt the androgen signaling.